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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of: **Michio Yamaji et al.**

Group Art Unit: 3679

Serial No.: 09/437,296

Examiner: Aaron Dunwoody

Filed: November 9, 1999

P.T.O. Confirmation No.: 7789

For: **FLUID COUPLING**

Attorney Docket : 991283

SECOND REPLY TO SUPPLEMENTAL EXAMINER'S ANSWER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

March 17, 2008

Sir:

This paper is in response to the Supplemental Examiner's Answer, supporting the rejections of the Office Action dated January 18, 2008. No fee is due. In the event that this paper is not timely filed, please consider it a petition for extension of time. Please charge any fees for such an extension of time, and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

The honorable Board is invited to consider:

Wrinkles, Bulges, and Deformation. Claim 1 recites the feature "wherein the gasket holding annular ridges are rounded so as to be in contact with flat, non-inclined faces of the gasket only at its radial midportion *so as* to relieve the inner peripheral portion of the gasket from *stress concentration and wrinkles*." The claimed "so as" implies correct tightening and excludes excessive over-tightening. Obviously, any gasket will stress and deform if it squeezed hard enough. The honorable Board is invited to note the specification at page 10, line 7:

.... the comparative coupling has the problem that the inner peripheral portion of the gasket 93 [Fig. 3] wrinkles when the coupling is tightened up. More specifically stated, stress concentration occurs on opposite end faces of the gasket

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93 at its inner peripheral portion as the fluid coupling is tightened up, with the result that even if *the coupling is tightened up properly*, wrinkles are created. If produced, the wrinkles permit deposition of dirt, causing trouble to the use of the coupling in semiconductor manufacturing equipment or the like which requires a very high degree of cleanliness. With the coupling of the present invention, the gasket holding annular ridges 71a, 72a are in contact with the gasket 73 at its radial midportion, so that the inner peripheral portion of the gasket 73 *is free of stress concentration* and therefore develops no wrinkles. (Emphasis added.)

The Examiner admits that there is disclosure of the Appellants' feature, "the gasket has an inside diameter less than that of the opening passageway" (page 2, last line). However, the Examiner then proposes that the Nakazawa gasket will bulge inwardly if squeezed hard.

Such hard squeezing is not disclosed; it comes from the imagination of the Examiner. The Examiner quotes Nakazawa for disclosing "great pressure" and "increased pressure" (quote on page 3 of the Answer), but the reference itself does not quantify this pressure and does *not* disclose that the gasket will bulge as a result of the pressure it actually discloses.

The Examiner Presumes A Force Sufficient for Anticipation. The Examiner's imagined inward bulging, if it were to occur, would be due to an *arbitrarily great* pressure—namely, a pressure sufficient for anticipation. The prior art does not teach increasing pressure until the Appellants' claims are anticipated.

Stress Concentration. The Board is invited to consider that when a gasket is "free of stress concentration," as the Appellants claim, then it is not being squeezed with a pressure that is arbitrarily great.

In sum, the Examiner invents a force sufficient to cause bulging—which is not disclosed—and also assumes that bulging will result from such imagined force—which is not disclosed. Furthermore, if such a deformation *were* to happen, it would be contrary to the claim language and therefore would be outside the scope of the claim.

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Full Tightening. Neither of the two references discloses squeezing its gasket to the point of deforming the edge; both show an assembled apparatus which is arguably already fully tightened. Indeed, the text of Nakazawa reproduced on page 3 implies that the assembly shown in the drawing is already as tight as it will be.

Eidsmore Lacks Increased Pressure. The Examiner applies the purported arbitrary force of Nakazawa to Eidsmore (Answer at page 3), but Nakazawa explicitly states that its "increased pressure" is due to its inclined faces acting "like a wedge," but Eidsmore's faces are *not* inclined and therefore will not have the increased pressure of Nakazawa (quoted in the Answer page 3, line 9).

Infinitesimals. In the Supplemental Answer at page 2, the Examiner argues that the "claims does not specify whether the inside is a lot less or a small amount less than the diameter of the opening passageway." The Examiner asserts "concentrated force [that] would cause the gasket to expand ... even if just a slight amount [which] would move the gasket [into] the opening passageway." Here the Examiner assumes a second arbitrary amount, the arbitrarily *small* amount by which the prior-art gasket should bulge in order to anticipate. The applied art does not disclose infinitesimal bulging and infinitesimal bulging cannot anticipate.

The Examiner Addresses Only One Argument and Has No Answer To The Others.
The Reply to Examiner's Answer of November 9, 2007, made three main arguments:

The Examiner has attempted to rebut only the first of the Appellants' arguments in the Reply, and has made no attempt to rebut the second argument (that the Examiner's Region₁ is actually a subset of Region₂, and therefore Region₂ includes any possible midpoint). Apparently, the Examiner has no rebuttal arguments to present.

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The Examiner has also failed to rebut the Appellants' third argument, based on MPEP §2125 (that the Examiner is taking proportions from a drawing and applying them as prior art). Again, it appears that the Examiner has no rebuttal arguments.

Mid-Point. The Appellants further note that the claimed feature of the ridges being at the mid-point, which was the subject of their second argument of November 9, further weakens the Examiner's argument based on hypothetical, arbitrarily great forces and hypothetical, arbitrarily small bulges. It is clear that squeezing a gasket at a "radial midportion" is less likely to cause deformation at the edges than squeezing it at the edges themselves.

Respectfully submitted,

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I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (571-273-8300) on March 17, 2008.

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Signature *Nick Bromer*